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REPORT NO. 12

Cotton Fiber and Processing Test Results

CROP of

1972



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38117 January 19, 1973

This is the twelfth of a series of reports of fiber and processing test results from the 1972 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, crop of 1971", April 1972. These reports are published by the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, P. O. Box 17723, Memphis, TN 38117.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1972

Discussion of Test Results

Cotton testing laboratories of the Agricultural Marketing Service, USDA, report that fibers from Southwestern short staple samples tested, to date, are longer, coarser and stronger than through the same date last year. Shirley Analyzer nonlint content and picker and card waste are lower. Yarns spun from these samples are stronger and have fewer imperfections than a year ago. Average spinning potential yarn number is higher.

Averages for all medium staple samples tested through January 12 show stronger fiber strength at zero gage than a year ago. Yarns spun from these samples show fewer imperfections.

Medium staple samples tested from the Southeast show stronger fiber strength than a year ago. Picker and card waste is lower. Yarns spun from these are stronger and show lower appearance grades, but fewer imperfections were noted as compared to last year. Average spinning potential yarn number is higher than a year ago.

South Central medium staple samples tested to date are shorter and stronger than a year ago. Yarns spun from these samples show about the same results as last season.

Medium staple samples from the Southwest show about the same fiber test results on samples tested as last season. Yarns spun from these samples have fewer imperfections. Average spinning potential yarn number is higher than last season.

No additional spinning lots were received from the West during this report period.

Averages for all long staple samples tested are stronger than last season. Picker and card waste and comber waste are lower than a year ago. Yarns spun from these samples have lower appearance grades. Average spinning potential yarn number is higher than a year ago.

No additional long staple lots were received from the Southeast, South Central and Western areas during this report period.

Extra long staple, American Upland, samples tested to date show approximately the same fiber test results as through the same comparable period last year. Comber waste is higher than a year ago. Fewer yarn imperfections were noted this season.

Extra long staple, American Pima, samples from the West are finer and weaker than a year ago. Picker and card waste is lower than last season. All other fiber and yarn quality measurements are about the same as last year.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States
1/
through January 12, 1973

Staple group Area, and Crop year	Lots tested	Fiber test results							Processing test results								
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality		Spin. Potent.						
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex		Skein str.	Yarn appear- ance				
				Inches			Pct.	Mpsi			G/tex			Pct.	Lbs.	Index	No.
<u>Short Staple:</u>																	
Southwest																	
	49	0.95	45	4.0	79	20	4.4	7.2	85	115	37	38					
	44	0.97*	45	4.2	81	21	3.6	6.5	94	117	27	46					
<u>Medium Staple:</u>																	
Southeast																	
	67	1.08	45	4.4	79	22	3.4	6.6	99	109	20	61					
	60	1.08	45	4.3	83	23	3.0	6.1	104	104	16	66					
South Central																	
	142	1.10	44	4.3	81	22	3.0	5.9	103	112	20	62					
	160	1.08	45	4.3	83	23	2.8	6.2	102	109*	19	64					
Southwest																	
	40	1.05	44	4.1	84	22	3.6	6.3	102	116	29	56					
	42	1.06	45	4.2	83	22	3.3	6.4	101	118	24	61					
West																	
	60	1.12	45	4.2	92	25	2.7	5.3	121	120	24	70					
	60	1.09	45	4.4	90	24	2.6	5.5	110	121	17	66					
U. S. Average																	
	309	1.09	44	4.3	83	23	3.1	6.0	105	113	22	63					
	262	1.08	45	4.3	85	23	2.9	6.0	104	113	19	64					
Significant dif- ference 2/																	
		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3					

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

* Corrected averages

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States
through January 12, 1973
1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results					Processing Test Results										
		Length		Mike	Strength Zero gage	SA Non- lint	P&C Waste	Pct.	Comber Waste	Yarn Quality							
		Span	Unif							Strength carded	Lbs. carded	Imprfctns card	SPY				
														Span	Unif	Strength	Lbs.
Long Staple:																	
Southeast	16	1.14	43	4.3	79	22	4.2	9.7	17.2		102	118	109	118	22	10	65
	19	1.12	44	4.3	85	24	3.6	8.5	16.9		107	123	102	117	24	10	68
South Central	3	1.22	43	4.5	83	24	5.3	9.6	16.4		113	130	107	117	20	9	70
	4	1.16	44	4.0	88	24	4.2	8.8	16.0		116	131	100	110	20	11	75
West	14	1.16	44	3.5	92	26	2.4	8.7	16.9		128	146	96	104	25	15	78
	15	1.17	44	3.6	91	25	2.5	7.2	15.6		126	145	91	100	26	13	86
U. S. Average	33	1.16	43	4.0	85	24	3.5	9.3	17.0		114	131	103	112	23	12	71
	38	1.15	44	4.0	88	24	3.4	8.2	16.2		116	133	98	109	23	11	76
Extra Long Staple:																	
West	2	1.41	30	4.0	105	30	2.0	8.2	16.0		66	66		100		10	
	2	1.40	32	4.0	104	33	2.4	8.4	16.6		64	64		100		6	
West	21	1.45	31	3.8	99	33	2.7	8.4	17.6		65	65		113		3	
	20	1.44	32	3.6	97	32	2.6	7.8	17.7		63	63		113		3	
Significant Difference 2/	0.02	2	0.2	2	1	0.5	0.5	0.5	0.5		4(22s)	4(22s)		5	2	2	3

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
				Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint	Color		P & C		Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial
											Raw Stock	Yel											
No	Grade	Stple	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No	
SOUTHWEST AREA																							
NORTHWEST TEXAS																							
ANSON																							
3	SLM LT SP	42	31	0.99	45	4.3	74	LANKART 611 20	8.0	3.4	3	4	100 PERCENT	301	91	8.0	6.7	120	120	41	29	44	
COTTON CENTER																							
2	LM SP	53L/32	32	0.97	46	2.9	74	STRIPPER 31 20	6.9	6.3	4	5	80 PERCENT	324	96	8.4	7.7	100	90	94	50	40	
PADUCAH																							
2	SLM LT SP	42	33	1.07	44	4.3	79	LANKART 57 22	6.6	3.0	4	4	90 PERCENT	298	94	7.9	6.2	120	120	36	21	52	
WESTERN AREA																							
NEW MEXICO																							
CAUSEY																							
2	SLM TG	44	30	0.92	47	2.7	79	GREGG 35 21	7.1	6.6	6	8	90 PERCENT	335	103	7.9	6.7	120	120	95	51	44	

1/ Reduced from 43 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns											
				Digital Fibrogaph		Mike	Fiber Strength		Elon- gat'n 1/8"		S.A. Non- Lint		Color Raw Stock		P & C Waste		Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Poten- tial
No	Grade	Stple	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Yel	Pct	Pct	Lbs	Lbs	Pct	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No	No
SOUTHEASTERN AREA																									
ALABAMA																									
4	LM	51	35	1.10	43	4.2	80	22	6.9	2.7	2	2		85 PERCENT	6.2	104	35	6.3	4.8	120	80	15	8	62	
SOUTH CENTRAL AREA																									
ARKANSAS																									
2	GO	71	31	0.97	45	4.7	90	21	4.1	4.2	7	3		100 PERCENT	8.1	93	27	4.7	2.8	120	90	20	14	41	
TENNESSEE																									
FAYETTEVILLE																									
4	LM	51	33	1.00	43	4.1	76	20	6.5	2.1	3	3		70 PERCENT	6.2	87	29	5.6	4.4	90	70	22	15	52	
SOUTHWEST AREA																									
NORTHWEST TEXAS																									
1	SLM	41	34	1.12	40	3.4	77	22	7.2	3.8	2	3		100 PERCENT*	6.0	102	39	6.8	5.1	110	80	39	28	63	
2	SLM LT SP	42	32	1.06	44	4.5	85	23	5.9	3.8	3	4		100 PERCENT	6.5	104	38	5.6	4.3	120	90	20	17	57	
2	ROPEVILLE	42	32	1.05	41	2.8	75	22	7.9	3.1	2	3		100 PERCENT	7.7	98	38	7.4	5.6	100	70	46	37	59	

* 100 percent selected for tests, less than 100 percent in the area
 1/ Reduced from 61 because of bark

Table 4--Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns									
Grade Name & Code		Stple	Array Length		Mike	Fiber Strength		Elon-gat'n 1/8" Gage	S.A. Non-Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfect'ns			
			UQL	CV		Zero Gage	1/8" Gage			Gra	Yel			50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx				
No			32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	
WESTERN AREA																							
ARIZONA																							
AGUILA																							
2 SLM	41	40	1.40	32	4.0	100	34	5.4	2.4	1	2	100 PERCENT	64	35	4.7	4.0	100	100	7	5	7	5	
DEL CERRO																							

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Combed Yarns										
No	Grade	Name & Code	Stple	32s		Array Length		Mike	Fiber Strength		Elon- gat'n 1/8" Gage	S.A. Non- Lint	Color Raw Stock		P & C Waste	Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns	
				UQL	CV	Zero Gage	1/8" Gage		Gra	Yel			50s or 12 tx	80s or 7 tx			50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx		
WESTERN AREA																								
ARIZONA																								
3	5	44		1.46	34	3.6	91	31	PIMA S-4	7.3	2.3	4	5	8.5	17.8	90 PERCENT	63	35	5.1	4.8	110	120	4	2
WENDEN																								
3	4	44		1.50	34	3.9	94	32	PIMA S-4	7.3	2.4	4	4	7.0	16.2	100 PERCENT	62	35	5.5	4.7	120	120	2	1
NEW MEXICO																								
COLUMBUS																								
3	4	44		1.42	33	3.3	93	31	PIMA S-4	8.0	2.9	3	6	7.8	15.2	95 PERCENT	62	35	5.5	4.9	120	120	2	1
WEST TEXAS																								
EL PASO																								
4	5	44		1.35	38	2.8	91	30	PIMA S-4	7.4	3.2	5	6	8.8	18.1	99 PERCENT	63	35	5.3	4.7	90	90	5	5

